EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jean Kuelper on March 31, 2009.

The application has been amended as follows:

Claim 1:   An optical coherence tomography method using an optical coherence tomography system having a light source, a detector, an analog to digital converter and a processor comprising:

generating an optical coherence tomography signal <u>using the light source and the detector</u>;

digitizing the ~~analog~~ optical coherence tomography signal to provide digital data points; and

processing the digital data points representing a portion of the signal in the time domain using non-linear regression with a sinusoidal model to fit the sinusoidal model to the digital data points.

Claim 11:   An optical coherence tomography method using an optical

coherence tomography system having a light source, a detector, an analog to

digital converter and a processor comprising:

generating, <u>using the light source and the detector</u>, an image signal

representing an image of materials that are changing or moving during imaging;

receiving digital data points representing a portion of the image signal;

processing the digital data points in the time domain by non-linear fitting of

a sinusoidal model to the digital data to determine a frequency of the signal,

wherein the digital data points represent a portion of the signal that is less

than a full cycle of a wave of the signal.

Claim 16:   A method of processing a<u>n optical coherence tomography</u> signal in

the time domain to determine a frequency of the signal where the frequency is

within a known range using a system having a<u>n analog to </u>digital <s>to analog</s>

converter and a processor comprising:

digitizing the signal to provide digital data points; and

processing the digital data points representing a portion of the signal in the

time domain using non-linear regression with a sinusoidal model optimized for

the known frequency range to determine parameters of the sinusoid fitting the

digital data, the parameters including frequency,

wherein the digital data points represent a portion of the signal that is less

than a full cycle of a wave of the signal.

The following is an examiner's statement of reasons for allowance:

The prior art fails to teach processing digital data points in the time domain using non-linear regression with a sinusoidal model to fit the sinusoidal model to the digital data points in use with an optical coherence tomography system and signal. Nor does the prior art teach the use of this process to determine frequency.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES KISH whose telephone number is (571)272-5554. The examiner can normally be reached on 8:30 - 5:00 ~ Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/
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JMK